Study supports costoplasty for rib hump deformity correction

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In the treatment of adolescent idiopathic scoliosis, the addition of costoplasty to pedicle screws and vertebral derotation may significantly improve correction of the rib hump deformity compared with pedicle screws and vertebral derotation alone, according to research published online Sept. 28 in the *Journal of Spinal Disorders & Techniques*.

(HealthDay)—In the treatment of adolescent idiopathic scoliosis, the addition of costoplasty to pedicle screws and vertebral derotation may significantly improve correction of the rib hump deformity compared with pedicle screws and vertebral derotation alone, according to research published online Sept. 28 in the *Journal of Spinal Disorders & Techniques*.

Marios G. Lykissas, M.D., Ph.D., of the University of Cincinnati, and colleagues used data from a multicenter registry to identify 36 adolescents with idiopathic scoliosis who had been treated with pedicle screws, direct vertebral rotation, and no costoplasty (group I) and 40 who

had been treated with pedicle screws, vertebral rotation, and costoplasty (group II). The rib index and Cobb angle were measured and compared between groups I and II.

The researchers found that the average pre- and postoperative Cobb angles did not significantly differ between groups I and II (preoperative angles, 49.7 and 49.8 degrees, respectively; postoperative angles, 10.2 and 10.9 degrees, respectively). However, adding costoplasty was associated with a significant improvement in postoperative rib index, yielding a correction of 13.7 percent for group I and 28.3 percent for group II.

"A major concern to adolescent idiopathic scoliosis patients and spine surgeons is rib hump deformity as a part of scoliosis deformity," the authors write. "Our study strongly infers that costoplasty combined with pedicle screws and vertebral derotation may significantly improve rib hump deformity as opposed to pedicle screws and vertebral derotation alone."

More information: Abstract
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